

REMARKS

Rejection of Claims 1, 3, and 4 under 35 U.S.C. §102(b) over Hawks, Jr.

Claims 1, 3, and 4 stand rejected as anticipated by the Hawks, Jr. reference. The Examiner considers Hawks to disclose the invention as claimed, including a fluid reservoir 54, misting nozzle 38, conduit (28, 136, 536), a pump (70, 500), an agitator (144, 514), a controller, a pressure switch, and a remote control (36).

Applicant traverses the rejection, as it might apply to the claims as amended herein. In order to anticipate the claims, Hawks must disclose each of the recited elements of the claims. See MPEP § 2131; *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) ("A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."). Applicant submits that Hawks does not disclose or suggest at least the elements of the controller and agitator, as set forth in claim 1.

The Examiner considers the recited controller of claim 1 to be disclosed by the pump switch described at lines 27-41 of column 6 of Hawks. This passage states:

The outflow pressure for the aforementioned SHUR-flo pump can be adjusted with an allenhead wrench which can be inserted through the aperture 166 in the pump cover 76. The aforementioned pump is equipped with a pressure switch and a sensor. If the sensor determines that pressure at the output side of the pump has reached a predetermined value. For example 50 PSI, then the switch shuts the pump off. If the operator 26 turns the on/off valve 36 on the wand 34 on, the pressure on the output side of the pump drops to near 0 PSI. The sensor immediately senses the pressure drop and the switch turns the pump on to restore pressure in the output side to a predetermined level. Those skilled in the art will recognize and understand the operation of this prior art pressure switch and sensor.

As amended, claim 1 recites a programmable controller that selectively operates the pump and the agitator in accordance with preprogrammed control parameters. This amendment is supported by the specification at least at page 12, lines 6-23. The device of Hawks,

however, is merely provided with a pressure cutoff switch for the pump. There is no programmable controller associated with the switch or the pump, or with the agitator. Because the programmable controller element is not taught or suggested by Hawks, claims 1, 3 and 4 should be allowable over Hawks.

Hawks is also missing the claimed agitator element. Claim 1 recites “an agitator for drawing outside air into the fluid reservoir for mixing of fluid insecticide within the reservoir.”

The Examiner points to two separate components (144 and 514) in two separate devices described in Hawks as constituting the agitator of claim 1. In fact, though, neither of those components meets the limitations of the agitator recited in claim 1. The component 144, which is depicted in Figure 6 of Hawks, is described as an agitator hose that “is connected to the barbed extension protruding from the agitator fitting, 192.” Hawks, col. 7, lines 21-22.

This agitator hose 144 does not draw outside air into the fluid reservoir for mixing of the insecticide within the reservoir, as recited in the claim. Instead, the hose 144 passes liquid chemical (not outside air) to a venturi nozzle 194 to cause the hose 144 to swing about in the fluid reservoir to mix the chemical. See Hawks, col. 7, lines 37-43.

The component 514, depicted in Figure 23 of Hawks, also does not teach or suggest the recited agitator of claim 1. The embodiment depicted in Figures 22 and 23 of Hawks is a “spraying system suitable for applying dry flowables.” Hawks, col. 11, lines 46-47. Thus, the system is used to disperse aerosolized dry particles instead of fluids. See Hawks, col. 12, lines 3-6 and 15-21. Component 514 is a check valve at the end of inlet hose 508. See Hawks, col. 12, lines 9-11. Air is pumped to the check valve 514 via pump 500. See Hawks, col. 12, lines 1-13. However, it does not mix fluid insecticide within the reservoir, as recited by claim 1.

Applicant submits further that Hawks actually teaches against the use of an air-injection type agitator with fluid insecticides. Hawks explicitly discloses a fluid insecticide dispensing system in Figures 4-10. However, for adequate mixing of the liquid insecticide, he teaches a fluid reinjection agitation system. Hawks does not suggest anywhere that an air injection agitation system would be suitable for mixing fluid insecticides, although he clearly is aware of this type of agitation for use with solid particles. Instead, Hawks specifically teaches use of fluid reinjection agitation alone for liquid insecticides.

Applicant respectfully requests that the Examiner withdraw the rejection.

Rejection of Claims 2, 11-16, and 20 Under 35 U.S.C. §103(a) over Hawks, Jr. and Khurgin

Claims 2, 11-16, and 20 stand rejected for obviousness over a combination of Hawks, Jr. and the Khurgin reference. The Examiner considers Hawks to disclose each of the recited elements of these claims except for the used of a plurality of float level sensors. He considers Khurgin, however, to teach the use of multiple float level sensors. He, therefore, concludes that it would have been obvious to one of skill in the art to provide a plurality of float level sensors with the device of Hawks in order to sense the level of liquid in Hawks' device.

Applicant disagrees and traverses the rejection. First, Applicant incorporates herein the arguments made previously regarding the inability of Hawks to disclose or suggest the subject matter of claim 1. Claim 2 should be allowable at least as depending from an allowable base claim. Claims 11-16 and 20 should be allowable because the controller and agitator elements recited therein are not disclosed or suggested by Hawks.

Further, though, there are strong practical reasons why it would be unobvious to combine Hawks with Khurgin in the manner the Examiner suggests. Claims 2, 12, and 20

recite that the level sensor provides a signal to the controller indicative of the level of insecticide in the reservoir. Hawks' device, as outlined previously, does not have a controller of the type recited. It also does not include any type of display or other indicator that would be useful to an operator to monitor the fluid level in the reservoir. Thus, the inclusion of a float level sensor in Hawks device would seem to provide no utility at all.

Further, with Hawks sprayer device, the operator is not physically located at or near the tank 54 during use. Hawks' system is intended to be mounted on a truck while an operator sprays the insecticide using a length of hose 28. See, e.g., Hawks, col. 2, line 57-col. 3, line 3. It is an object of Hawks' invention to avoid requiring the operator to return to the truck during application of insecticide. See Hawks, col. 3, lines 9-12. Applicant submits then that Hawks actually teaches against the inclusion of a float sensor arrangement in Hawks' sprayer device. If such were included with Hawks' sprayer device, further included a display or other indicator for the fluid level, this would necessitate an operator having to return to the truck during operation to check the fluid level. This would, then, change the principle of operation for Hawks' device or at least render it partially unsatisfactory for its intended purposes.

It is also an object of Hawks' invention to reduce manufacturing costs. See Hawks, col. 5, lines 6-7. Applicant submits that adding a float level sensor assembly, as the Examiner suggests, is taught against because Hawks teaches to minimize manufacturing costs.

Rejection of Claim 10 Under 35 U.S.C. §103(a) over Hawks, Jr. and Sowry

Claim 10 has been rejected for obviousness over a combination of Hawks, Jr. with the Sowry reference. The Examiner considers Hawks, Jr. to teach the claimed invention with the exception of the claimed moisture sensor. However, he also considers Sowry to

teach use of a moisture sensor in a fertilizer sprayer system. He concludes that it would have been obvious to one of ordinary skill in the art to have provided a moisture sensor in the device of Hawks, Jr., as taught by Sowry in order to sense moisture in the ground.

Applicant traverses the rejection. First, Applicant incorporates herein the arguments made above with respect to the inability of Hawks to anticipate or render obvious independent claim 1. Claim 10 should be allowable at least as depending from an allowable claim 1.

Rejection of Claims 5-9 Under 35 U.S.C. §103(a) over Hawks, Jr. and Dodds

Claims 5-9 stand rejected as obvious in view of Hawks and the Dodds reference. The Examiner considers Hawks to disclose the claims invention with the exception of the claimed transmitter for transmission of selected information relating to the system to a remote monitoring location. He notes that Dodds describes a transmitter 115 to send various information and data. He concludes that it would have been obvious to one of skill in the art to have provided Hawks' sprayer device with a transmitter, as taught by Dodds, to remotely collect data.

Applicant traverses the rejection. First, claims 5-9 should be allowable at least as depending from an allowable claim 1. Further, Applicant submits that there is no motivation other than hindsight gathered from Applicant's own disclosure for combining Hawks and Dodds. In fact, the system of Hawks and that of Dodds are quite dissimilar and seek to provide different and contradictory objectives. Dodds has a complex system that is used to control a number of irrigation system valves. See Dodds, col. 1, lines 4-8. Dodds uses the transmitter to replace a number of control and power wires that were previously used to transmit data about the status of and to control the valves. See Dodds, col. 1, lines 18-21, 29-32.

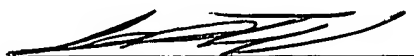
Hawks' sprayer device, on the other hand, is intended to be used by a single user and portably brought from location to location. So far as Applicant can determine, there is not a significant wiring problem to be corrected. Also, there does not appear to be any remote user or remote location described to where data might be sent. Further, it is not clear that there are the necessary components present in Hawks' system to provide data to a transmitter. The advantage that Dodds seeks to achieve, that of eliminating a significant amount of wiring for operation of a plurality of valves would not be realized in Hawks' system, where there is but a single pump to control. Applicant submits that one of skill in the art would not be motivated to add a transmitter and associated components to Hawks' device since that would defeat a clearly stated intent of Hawks' invention, which is to provide reduced manufacturing costs.

Rejection of Claims 17-19 Under 35 U.S.C. §103(a) over Hawks, Jr., Khurgin and Dodds

Claims 17-19 stand rejected for obviousness over a combination of Hawks, Khurgin, and Dodds. Application traverses the rejection. As outlined above, Hawks fails to disclose the elements of claim 11, from which these claims depend. Further, Dodds is not properly combinable with Hawks.

Respectfully submitted,

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